

## CLAIMS

1. A method for improving one or more physical/chemical characteristics of a  $^{18}\text{F}$ -fluor-deoxy-glucose ( $^{18}\text{F}$ -FDG)-  
5 solution, which method comprises the steps of:  
a) provision of a  $^{18}\text{F}$ -fluor-deoxy-glucose ( $^{18}\text{F}$ -FDG)-  
solution, and  
b) addition of at least one buffer based on a weak acid  
to the  $^{18}\text{F}$ -fluor-deoxy-glucose ( $^{18}\text{F}$ -FDG)-solution.  
10
2. The method according to claim 1, wherein the improved  
physical/chemical characteristic is the ability of the  
 $^{18}\text{F}$ -FDG-solution to be autoclaved, thus rendering the  
solution suitable for medical applications.  
15
3. The method according to claim 1, wherein the improved  
physical/chemical characteristic is reduced radiolysis  
in the  $^{18}\text{F}$ -fluor-deoxy-glucose (FDG)-solution.
- 20 4. The method according to claim 1, wherein the buffer  
based on a weak acid, is selected from the group  
consisting of citrate, acetate, ascorbate and  
combinations thereof.
- 25 5. The method according to claim 4, wherein the pH of the  
citrate buffer is lower than 5.5, preferably between pH  
2 and 5.5.
- 30 6. The method according to claim 4, wherein the pH of the  
acetate buffer is between 3.0 and 5.5.

7. The method according to claim 4, wherein the pH of the ascorbate buffer is between 3.0 and 5.5.
8. A method of preparing a sterile  $^{18}\text{F}$ -fluor-deoxy-glucose  
5 ( $^{18}\text{F}$ -FDG)-solution by autoclaving a  $^{18}\text{F}$ -fluor-deoxy-glucose (FDG)-solution at a temperature between  $110^{\circ}\text{C}$  and  $145^{\circ}\text{C}$ .
9. A method of preparing a sterile  $^{18}\text{F}$ -fluor-deoxy-glucose  
10 ( $^{18}\text{F}$ -FDG)-solution by autoclaving a  $^{18}\text{F}$ -fluor-deoxy-glucose (FDG)-solution at a temperature between  $130^{\circ}\text{C}$  and  $140^{\circ}\text{C}$ .
10. A method of preparing a sterile  $^{18}\text{F}$ -fluor-deoxy-glucose  
15 ( $^{18}\text{F}$ -FDG)-solution by autoclaving a  $^{18}\text{F}$ -fluor-deoxy-glucose (FDG)-solution at a temperature of  $134^{\circ}\text{C}$ .
11. The method according to claim 8, wherein the autoclaving process is performed for a period of 1 to 30 minutes.  
20
12. The method according to claim 8, wherein the autoclaving process is performed for a period of 1 to 10 minutes.
13. The method according to claim 8, wherein the autoclaving  
25 process is performed for a period of 2 to 5 minutes.
14. A  $^{18}\text{F}$ -fluor-deoxy-glucose (FDG)-solution with improved physical/chemical characteristics obtained by the method of claim 1.  
30
15. A sterile fludeoxyglucose (FDG)-solution obtained by the method of claim 8.